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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,962	01/15/2002	Takeshi Funahashi	Q66581	3096

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EXAMINER

UPRETI, ASHUTOSH

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 12/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/044,962

Applicant(s)

FUNAHASHI, TAKESHI

Examiner

Ashutosh Upreti

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 01/15/2002.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Adachi (U.S. Patent 5,151,795).

As to claim 1, Adachi discloses:

Obtaining a plurality of radiation image signals (column 5, line 37) representing a plurality of radiation images of an object (column 5, lines 6-8), which radiation images have been formed with several kinds of radiation having different energy distributions (column 7, line 67 to column 8, line 2). Here one image is formed with high-energy x-rays and another is formed with low-energy x-rays;

obtaining an energy subtraction image signal, which has been formed from the plurality of the radiation image signals (column 7, lines 6-8);

performing compression processing on the plurality of the radiation image signals (column 8, lines 8-9, the low-energy and high energy images are radiation images represented by image signals) and the energy subtraction image signal (column 7, lines 63-65);

the energy subtraction image signal is compressed with a compressibility higher than the compressibility with respect to each of the radiation image signals (column 8, lines 13-15).

As to claim 2, it is an apparatus corresponding to the method of claim 1. Adachi discloses an x-ray image recording apparatus (Figure 1) and an image readout apparatus (Figure 2), with which the method is performed. The limitations are therefore rejected for the same reasons as in claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adachi in view of Ohara (U.S. Patent Application 2001/0038707 A1).

As to claims 3 and 4, Adachi as applied above discloses that irreversible compression of image signals is commonly known in the art (column 1, lines 40-41).

Adachi does not expressly disclose reversible compression.

Ohara discloses that employing either reversible compression or irreversible compression when compressing image data is commonly known in the art (e.g. JPEG, wavelet compression, etc.) (Paragraph 0223 of the detailed description, lines 3-6).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use the reversible compression of Ohara with images of Adachi as they both deal with compression of x-ray images and the compression techniques are well known in the art.

One of ordinary skill in the art would have been motivated to do this as reversible compression results in no data loss, as opposed to irreversible compression.

As to claims 5 and 6, setting the compressibility of a compressing process is a design choice and is therefore unpatentable. It is considered to be a design choice as the amount of compressibility is chosen by an apparatus designer taking into account factors like desired compression losses, bandwidth capacity and apparatus cost. These factors can be varied according to specific circumstances and specifying a particular numeric value does not add to the scope of the invention.

Contact Details

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashutosh Upreti whose telephone number is (703) 306 4087. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703)308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2623

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A.U.

December 21, 2004


Jon Chang
Primary Examiner